IMPROVING INTERVIEW DATA QUALITY THROUGH AUDIO COMPUTER-ASSISTED SELF-INTERVIEWS

OVERVIEW

Interview data traditionally are collected face-to-face despite concerns about the ability to obtain truthful responses on sensitive topics, including serostatus knowledge, treatment uptake, condom use, or anal sex.[1] Survey participants may feel a need to respond to interview questions in a manner that would be viewed favorably by the interviewer. Data collection methods that reduce social desirability bias, reinforce anonymity, and encourage more truthful answers are needed to improve data validity. Computer-assisted self-interviews (CASI) offer investigators an opportunity to do just that. CASI is a data collection method that presents questions and response options to participants visually on a computer or tablet screen, and aloud on headphones. Participants enter their responses by themselves using a mouse, touch screen, or keyboard. The addition of an audio component (ACASI) makes the method accessible to participants with little to no literacy. A staff member is usually present nearby to offer assistance when necessary, but is otherwise not involved in interview administration.

CDC'S ROLE

The U.S. Centers for Disease Control and Prevention (CDC) is committed to promoting best practices in data collection. Recognizing the need for more accurate self-reported data, the CDC and partners have committed to the utilization of ACASI in various settings and developed tools towards this goal. In developing ACASI tools and recommendations for their use, the CDC aims to promote a standard for high quality self-reported data collection.

ACCOMPLISHMENTS / RESULTS

ACASI functionality. The financial and technical investment required to use ACASI has hindered its widespread adoption. ACASI requires the purchase of hardware (i.e. computers, tablets, smartphones), and software (e.g., Questionnaire Design System, Snap Surveys), and programming expertise to create data collection tools. To help countries overcome these initial barriers to use, CDC has supported the development of ACASI functionality in ODK (Open Data Kit) through Westat[2] [3] [4] a free, Android-based data collection software.

The CDC and implementing partners have been using ACASI for biobehavioral surveys among key and priority populations, as well as in select HIV testing services. In Uganda, for example, clients and survey participants have consistently shown preference for ACASI over face-to-face interviews. In a survey among drug users for example, 64% stated to prefer ACASI over face-to-face interviews, and 57% stated to more likely give private information to a computer compared to 20% giving such information preferably to a person. After interview completion, the recorded ACASI responses data are processed in real time by a computer that then plays prep-prepared HIV counseling videos tailored to client's ACASI responses, including high risk behavior, depression, or alcohol abuse.

To assess social desirability bias in a household population-based survey, a sub-sample of participants in the 2015-2016 Zimbabwe Population-based HIV Impact Assessment were asked a subset of questions a second time using a computer-assisted self-interview instead of a face-to-face interview. Results comparing survey results from CASI and face-to-face data collection methods are forthcoming.

FUTURE EFFORTS

Electronic questionnaires. CDC provides technical assistance for biobehavioral surveys. Together with UNAIDS, World Health Organization, and FHI 360, CDC developed the Biobehavioral Survey Guidelines for Populations at Risk for HIV. These guidelines describe the latest approaches and methodologies for planning and conducting surveys in key and priority populations. The guidelines will also include electronic CASI-ready data collection instruments for use by investigators. CDC experts are programming the Biobehavioral Survey Guideline questionnaires in

[1] Phillips, A. E., Gomez, G. B., Boily, M. C., & Garnett, G. P. (2010). A systematic review and meta-analysis of quantitative interviewing tools to investigate self-reported HIV and STI associated behaviours in low- and middle-income countries. *Int J Epidemiol, 39*(6), 1541-1555.

[2] https://opendatakit.org/help/form-design/examples/#audio_prompts

[3] http://xlsform.org/#media

[4] https://docs.google.com/spreadsheets/d/1Rxft3H3xl3M9bLFGR2XhXzt1ucyFmd0qFmOQ6FaqJw4/edit#gid=246559171

Questionnaire Development System (QDS, for Windows) and ODK (Android) to decrease the programming-burden on survey teams and facilitate more partners adopting ACASI technology. These fully programmed instruments will become available in 2017.
Global targets aimed at ending the HIV epidemic call for accurate self-reported data on serostatus knowledge and treatment status. Furthermore, it is the individuals who have not been reached who will help us understand the reach of our current programs. People living with HIV but unaware of their status, those aware but not in treatment, or those in treatment but not adhering may not be willing to admit their challenges and barriers to service providers or survey staff. ACASI is a more effective and favorable method for collecting such data because it minimizes privacy concerns, reinforces anonymity, and encourages more truthful answers to sensitive questions.

BENEFITS OF OUR WORK

CDC is promoting the use of ACASI as an interview data collection method that reduces reporting bias. Multiple surveys among key and other populations have shown that ACASI more frequently solicits truthful, yet potentially stigmatizing, responses from participants in the field of sexual health , , or any other socially sensitive topic, both in the U.S. and abroad. The adoption of ACASI also strengthens the informatics and data management capacity in field programs, at Ministries of Health, and with implementingw partners.